**Chemistry The Mole (Chapter 10 Outline)**

***AS YOU READ, RESPOND TO THE FOLLOWING:***

*Vocabulary*: **Define in your own words**

mole-

Avagadro's number-

molar mass-

percent composition-

empirical formula-

molecular formula-

hydrate-

Respond to the questions/prompts below:

What is a common everyday counting unit to which the mole can be related? Explain. (2 pts)

How can the number of moles be converted to the mass of an element and vice versa? Describe the steps needed to perform this calculation. (4 pts)

Why can the mass of an atom be related to the mass of a mole of atoms? Explain. (2 pts)

What are the mole relationships shown by a chemical formula? (1 pt)

How is the molar mass of a compound calculated? Provide a list of steps to to perform this calculation. (3 pts)

What is meant by percent composition of a compound? How do you determine the percent composition of a compound? Explain. (3 pts)

How can the empirical and the molecular formulas for a compound be determined for a compound from the mass percent and actual mass data? Explain. (2 pts)

What is a hydrate and how does its name relate to its composition? Explain (2 pts)

***ABOUT THE READING:***

Write three things that you learned about the Mole*:*

***Make sure to write a full sentence.***

*Example: I learned that temperature is a measure of an object's average kinetic energy.*

*1.*

*2.*

*3.*

***Assigned work****: Chapter 10 assessment, problems # 91-93, 109, 128, 138, 162, 167, 179, 182, 184*